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International Specialists in the Environmental Sciences

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11/26/86

MEMORANDUM

DATE: November 26, 1986

TO: John Osborn, FIT-RPO, USEPA, Region X

FOR: Joyce Crosson, RSSC, USEPA, Region X

THRU: David Buecker, FIT-OM, E&E, Seattle *DB*

FROM: Roger McGinnis, Chemist, E&E, Seattle *RMG*
Andrew Hafferty, Senior Chemist, E&E, Seattle *AH*

SUBJ: QA of Case 6507 (Inorganics)
Pasco Sanitary Landfill/Resource Recovery

REF: TDD F10-8611-01

CC: Gerald Muth, DPO, USEPA, Region X
Patricia Krantz, DPO, USEPA, Region III
Marcia Knadle, ESD-PO, USEPA, Region X
Deborah Flood, HWD-SM, USEPA, Region X

The Quality Assurance review of 26 samples, Case 6507, collected from Pasco Sanitary Landfill/Resource Recovery has been completed. Twenty-six low level water samples were analyzed for HSL inorganics by Hittman Ebasco Associates, Inc. of Columbia, Maryland. The samples were numbered:

MJB106	MJB115	MJB125
MJB107	MJB116	MJB126
MJB108	MJB117	MJB127
MJB109	MJB119	MJB128
MJB110	MJB120	MJB129
MJB111	MJB121	MJB130
MJB112	MJB122	MJB131
MJB113	MJB123	MJB132
MJB114	MJB124	

Data Qualifications

The following comments refer to the laboratory performance in meeting the Quality Control specifications outlined in IFB WA 85J-838.

- 1) Timeliness - Acceptable
- 2) Initial Calibration - Acceptable

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- 3) Continuing Calibration - Acceptable
- 4) Instrument Detection Limits - Acceptable
- 5) Blank

Low levels of calcium, iron, mercury, silver, and sodium were present in the laboratory method blanks. However, concentrations were below the CRDL.

- 6) ICP Interference Check - Acceptable
- 7) Laboratory Control Sample

Recoveries for a number of elements were out of control.

<u>Sample No.</u>	<u>Element</u>	<u>% Recovery</u>	<u>QC Limit</u>
MJB127-132	Aluminum	83%	90-110%
MJB127-132	Antimony	86%	90-110%
MJB106-126	Chromium	86%	90-110%
MJB127-132	Iron	113%	90-110%
MJB106-126	Lead	89%	90-110%
MJB106-132	Mercury	80%	90-110%
MJB106-132	Potassium	87%	90-110%
MJB127-132	Selenium	89%	90-110%
MJB106-132	Sodium	118%	90-110%

- 8) Duplicate Sample Analysis

The relative percent differences for two elements were out of control.

<u>Sample No.</u>	<u>Element</u>	<u>RPD</u>	<u>QC Limit</u>
MJB 106-126	Iron	23%	20%
MJB 106-126	Lead	23%	20%

9) Spiked Sample Analysis

Spike recoveries for a number of elements were out of control.

Samples MJB106-126

<u>Element</u>	<u>% R</u>	<u>QC Limits</u>
Iron	145%	75-125%
Lead	10%	75-125%
Mercury	130%	75-125%
Selenium	64%	75-125%
Silver	70%	75-125%
Zinc	267%	75-125%

Samples MJB127-132

<u>Element</u>	<u>% R</u>	<u>QC Limits</u>
Lead	55%	75-125%
Mercury	140%	75-125%

10) ICP Serial Dilution

The percent difference for one element was out of control.

<u>Element</u>	<u>% D</u>	<u>QC Limits</u>
Calcium	> 20%	10%

11) Furnace AA - Acceptable

12) Mercury Analysis - Acceptable

13) Samples

Calcium results are flagged as estimated (J) due to large differences for the ICP serial dilutions. Reported results are based on the diluted sample.

Iron, mercury, selenium, silver, and zinc results for samples MJB106-126 were flagged as estimated (J) due to out of control spike recoveries. Iron, mercury, and zinc results for these samples may be biased high while selenium and silver results may exhibit a low bias. Lead results for these samples were rejected (R) due to unacceptably low spike recovery.

Lead and mercury results for samples MJB127-132 were flagged as estimated (J) based on out of control spike recoveries. Lead may be biased low and mercury results may be biased high.

Iron and lead results for all samples are also flagged as estimated (J) due to large percent differences for duplicate sample analyses.

Chromium and lead results for samples MJB106-126 were flagged as estimated (J) based on low recoveries for the laboratory control sample.

Aluminum, antimony, iron, and selenium results for samples MJB127-132 are flagged estimated (J) based on laboratory control samples results which do not meet QC limits. Mercury, potassium, and sodium results for all samples are flagged as estimated (J) for the same reason.

Data Use

The usefulness of the data is based on the criteria outlined in the "Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses" (R-582-5-5-01).

Upon consideration of the above comments, the data is ACCEPTABLE for use except where flagged with data qualifiers which modify the usefulness of individual values.

Lead data for samples MJB106-126 are REJECTED.

Data Qualifiers

- U - The material was analyzed for, but was not detected. The associated numerical value is an estimated sample quantitation limit.
- J - The associated numerical value is an estimated quantity because quality control criteria were not met.
- R - Quality Control indicates that data are unusable (compound may or may not be present). Resampling and reanalysis are necessary for verification.
- Q - No analytical result.
- N - Presumptive evidence of presence of material (tentative identification).

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Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 4-557-2490

EPA Sample No.
MJB 106

Date 11/11/86

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc.

CASE NO. 6507

SOW NO. 7/84

LAB SAMPLE ID. NO. NA

QC REPORT NO. 72

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

(ug/L) or mg/kg dry weight (Circle One)

- | | | | |
|--------------|---------|--------------------|---------|
| 1. Aluminum | 440 | 13. Magnesium | 22900 |
| 2. Antimony | 60 U | 14. Manganese | 40 |
| 3. Arsenic | 10U | 15. Mercury | 0.3 J |
| 4. Barium | 73 | 16. Nickel | 158 |
| 5. Beryllium | 3.0U | 17. Potassium | 6570 J |
| 6. Cadmium | 4.8U | 18. Selenium | 5.0U J |
| 7. Calcium | 61600 J | 19. Silver | 10U J |
| 8. Chromium | 11 J | 20. Sodium | 34200 J |
| 9. Cobalt | 6.8U | 21. Thallium | 10U |
| 10. Copper | 6.0U | 22. Tin | 37U |
| 11. Iron | 1550 J | 23. Vanadium | 10 |
| 12. Lead | 27 J R | 24. Zinc | 26 J |
| Cyanide | NR | Percent Solids (Z) | |

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager Euzabeta A Pickrel for GS

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Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-357-2490

EPA Sample No.
MJB 107

Date 11/11/86

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc.

CASE NO. 6507

SOW NO. 7/84

LAB SAMPLE ID. NO. NA

QC REPORT NO. 72

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1. Aluminum	12800	13. Magnesium	30100
2. Antimony	60 U	14. Manganese	612
3. Arsenic	10U	15. Mercury	0.3 J
4. Barium	230	16. Nickel	65
5. Beryllium	3.0U	17. Potassium	9100 J
6. Cadmium	4.8U	18. Selenium	25U J
7. Calcium	78900 J	19. Silver	10U J
8. Chromium	19 J	20. Sodium	46300 J
9. Cobalt	9.0	21. Thallium	10U
10. Copper	22	22. Tin	37U
11. Iron	26900 J	23. Vanadium	46
12. Lead	28 R	24. Zinc	76 J
Cyanide	NR	Percent Solids (Z)	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: 5c - dilution factor 5.

Lab Manager Eijallem A Pickral for GS

Rnm
11/17/86

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MJB 108

Date 11/11/86

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc.

CASE NO. 6507

ROW NO. 7/84

LAB SAMPLE ID. NO. NA

QC REPORT NO. 72

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1. Aluminum	88u	13. Magnesium	624
2. Antimony	60 U	14. Manganese	3.1u
3. Arsenic	10u	15. Mercury	0.4 J
4. Barium	6.0	16. Nickel	10 U
5. Beryllium	3.0u	17. Potassium	210 J
6. Cadmium	4.8u	18. Selenium	5.0u J
7. Calcium	2080 J	19. Silver	10u J
8. Chromium	10 U J	20. Sodium	1530 J
9. Cobalt	6.8u	21. Thallium	10u
10. Copper	6.0u	22. Tin	37u
11. Iron	45 J	23. Vanadium	5.8u
12. Lead	5.0 U R	24. Zinc	8.0 J
Cyanide	NR	Percent Solids (%)	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager Engelbert A. Pickral for GS

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Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MJB 109

Date 11/11/86

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc.
SOW NO. 7/84
LAB SAMPLE ID. NO. NA

CASE NO. 6507

QC REPORT NO. 72

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

(ug/L) or mg/kg dry weight (Circle One)

1. Aluminum	88u		13. Magnesium	24400	
2. Antimony	60 U		14. Manganese	21	
3. Arsenic	10u		15. Mercury	0.3	J
4. Barium	80		16. Nickel	49	
5. Beryllium	3.0u		17. Potassium	8330	J
6. Cadmium	4.8u		18. Selenium	25u	J
7. Calcium	76600	J	19. Silver	10u	J
8. Chromium	20	J	20. Sodium	43900	J
9. Cobalt	6.8u		21. Thallium	10u	
10. Copper	6.0u		22. Tin	37u	
11. Iron	560	J	23. Vanadium	13	
12. Lead	5.0 UF	R	24. Zinc	9.0	J
Cyanide	NR		Percent Solids (Z)		

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: se dilution factor 5.

Lab Manager Elizahem A Pickral for GS

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Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MJB 110

Date 11/11/86

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc.

CASE NO. 6507

SOW NO. 7/84

QC REPORT NO. 72

LAB SAMPLE ID. NO. NA

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1. Aluminum	88u		13. Magnesium	7.7u	
2. Antimony	300 U		14. Manganese	24 ^{PKH} 3.1u	
3. Arsenic	10u		15. Mercury	0.5	J
4. Barium	4.1u		16. Nickel	10 U	
5. Beryllium	3.0u		17. Potassium	14u	J
6. Cadmium	4.8u		18. Selenium	5.0u	J
7. Calcium	29		19. Silver	10u	J
8. Chromium	10 U	J	20. Sodium	523	J
9. Cobalt	6.8u	J	21. Thallium	10u	
10. Copper	6.0u		22. Tin	37u	
11. Iron	46	J	23. Vanadium	6.37 ^{PKH} 5.8u	
12. Lead	5.0u	R	24. Zinc	3.1u	J
Cyanide	NR		Percent Solids (%)		

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Sb dilution factor of 5x

Lab Manager Eugene A. Pickral for GS

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Form I

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Sample Management Office
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703/557-2490 FTS: 8-557-2490

EPA Sample No.
MJB 111

Date 11/11/86

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc.

CASE NO. 6507

SOW NO. 7/84

LAB SAMPLE ID. NO. NA

QC REPORT NO. 72

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

(ug/L) or mg/kg dry weight (Circle One)

1. Aluminum	3380		13. Magnesium	27900	
2. Antimony	60 U		14. Manganese	185	
3. Arsenic	12		15. Mercury	0.5	J
4. Barium	188		16. Nickel	136	
5. Beryllium	3.0U		17. Potassium	10000	J
6. Cadmium	4.8U		18. Selenium	25U	J
7. Calcium	95200		19. Silver	10U	J
8. Chromium	502	J	20. Sodium	51200	J
9. Cobalt	6.8U	J	21. Thallium	10U	
10. Copper	6.0U		22. Tin	37U	
11. Iron	12500	J	23. Vanadium	46	
12. Lead	13	R	24. Zinc	32	J
Cyanide	NR		Percent Solids (Z)		

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: SE-dilution factor 5.

Lab Manager Elizabeth A. Pickral for GS

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Form 1

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Sample Management Office
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703/557-2490 FTS: 8-557-2490

EPA Sample No.
MJB 112

Date 11/11/86

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc.

CASE NO. 6507

SOW NO. 7/84

LAB SAMPLE ID. NO. NA

QC REPORT NO. 72

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1. Aluminum	88u		13. Magnesium	186	
2. Antimony	60 U		14. Manganese	3.1u	
3. Arsenic	10u		15. Mercury	0.3	J
4. Barium	4.1u		16. Nickel	10 U	
5. Beryllium	3.0u		17. Potassium	74	J
6. Cadmium	4.8u		18. Selenium	5.0u	J
7. Calcium	900	J	19. Silver	10u	J
8. Chromium	10 U	J	20. Sodium	818	J
9. Cobalt	6.8u		21. Thallium	10u	
10. Copper	12		22. Tin	37u	
11. Iron	86	J	23. Vanadium	5.8u	
12. Lead	5.0 U	R	24. Zinc	4.0	J
Cyanide	NR		Percent Solids (Z)		

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager Eiyalem A Pickrel for GS

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Form I

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Sample Management Office
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703/557-2490 FTS: 8-557-2490

EPA Sample No.
MJB 113

Date 11/11/86

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc.

CASE NO. 6507

SOW NO. 7/84

LAB SAMPLE ID. NO. NA

QC REPORT NO. 72

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

(ug/L) or mg/kg dry weight (Circle One)

1. <u>Aluminum</u> <u>88U</u>	13. <u>Magnesium</u> <u>22100</u>
2. <u>Antimony</u> <u>60 U</u>	14. <u>Manganese</u> <u>13</u>
3. <u>Arsenic</u> <u>10U</u>	15. <u>Mercury</u> <u>0.6</u> J
4. <u>Barium</u> <u>59</u>	16. <u>Nickel</u> <u>10 U</u>
5. <u>Beryllium</u> <u>3.0U</u>	17. <u>Potassium</u> <u>6350</u> J
6. <u>Cadmium</u> <u>4.8U</u>	18. <u>Selenium</u> <u>5.0U</u> J
7. <u>Calcium</u> <u>60700</u> J	19. <u>Silver</u> <u>10U</u> J
8. <u>Chromium</u> <u>10 U</u> J	20. <u>Sodium</u> <u>41100</u> J
9. <u>Cobalt</u> <u>6.8U</u>	21. <u>Thallium</u> <u>10U</u>
10. <u>Copper</u> <u>6.0U</u>	22. <u>Tin</u> <u>37U</u>
11. <u>Iron</u> <u>691</u> J	23. <u>Vanadium</u> <u>15</u>
12. <u>Lead</u> <u>5.0 U</u> R	24. <u>Zinc</u> <u>3.1U</u> J
Cyanide <u>NR</u>	Percent Solids (%) _____

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager Eijabem A Pickral for GS

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Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MJB 114
Date 11/11/86

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc.
SOW NO. 7/84
LAB SAMPLE ID. NO. NA

CASE NO. 6507
QC REPORT NO. 72

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1. Aluminum	48U		13. Magnesium	7.7U	
2. Antimony	60 U		14. Manganese	18	
3. Arsenic	10U		15. Mercury	0.4	J
4. Barium	5.0		16. Nickel	16	
5. Beryllium	3.0U		17. Potassium	14U	J
6. Cadmium	4.8U		18. Selenium	5.0U	J
7. Calcium	101	J	19. Silver	10U	J
8. Chromium	10 U	J	20. Sodium	1080	J
9. Cobalt	6.8U		21. Thallium	10U	
10. Copper	6.0U		22. Tin	37U	
11. Iron	123	J	23. Vanadium	5.8U	
12. Lead	5.0 U	R	24. Zinc	3.1U	J
Cyanide	NR		Percent Solids (X)		

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager Ejalem A Pictual for GS

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11/19/86

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MJB 115

Date 11/11/86

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc.
SOW NO. 7/84
LAB SAMPLE ID. NO. NA

CASE NO. 6507
QC REPORT NO. 72

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

(ug/L) or mg/kg dry weight (Circle One)

1. Aluminum	<u>475</u>		13. Magnesium	<u>7.7u</u>	
2. Antimony	<u>60 U</u>		14. Manganese	<u>404</u>	
3. Arsenic	<u>10u</u>		15. Mercury	<u>0.4</u>	<u>J</u>
4. Barium	<u>176</u>		16. Nickel	<u>46</u>	
5. Beryllium	<u>3.0u</u>		17. Potassium	<u>8560</u>	<u>J</u>
6. Cadmium	<u>4.8u</u>		18. Selenium	<u>25u</u>	<u>J</u>
7. Calcium	<u>9.6u</u>	<u>J</u>	19. Silver	<u>10u</u>	<u>J</u>
8. Chromium	<u>10</u>	<u>J</u>	20. Sodium	<u>42600</u>	<u>J</u>
9. Cobalt	<u>6.8u</u>		21. Thallium	<u>10u</u>	
10. Copper	<u>6.0u</u>		22. Tin	<u>43</u>	
11. Iron	<u>18</u>	<u>J</u>	23. Vanadium	<u>62</u>	
12. Lead	<u>17 U^{PH} 17</u>	<u>R</u>	24. Zinc	<u>95</u>	<u>J</u>
Cyanide	<u>NR</u>		Percent Solids (%)		

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Se - dilution factor 5.

Lab Manager Eijabem A Pickral for GS

Rnm
11/19/86

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MJB 116

Date 11/11/86

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc.

CASE NO. 6507

SOW NO. 7/84

QC REPORT NO. 72

LAB SAMPLE ID. NO. NA

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1. Aluminum	<u>166</u>		13. Magnesium	<u>7.7u</u>	
2. Antimony	<u>60 U</u>		14. Manganese	<u>1860</u>	
3. Arsenic	<u>22</u>		15. Mercury	<u>0.4</u>	<u>J</u>
4. Barium	<u>551</u>		16. Nickel	<u>95</u>	
5. Beryllium	<u>3.0</u>		17. Potassium	<u>13800</u>	<u>J</u>
6. Cadmium	<u>12 PPH HPH 14</u>		18. Selenium	<u>25u</u>	<u>J</u>
7. Calcium	<u>9.6u</u>	<u>J</u>	19. Silver	<u>10u</u>	<u>J</u>
8. Chromium	<u>51</u>	<u>J</u>	20. Sodium	<u>45500</u>	<u>J</u>
9. Cobalt	<u>73</u>		21. Thallium	<u>17</u>	
10. Copper	<u>104</u>		22. Tin	<u>86</u>	
11. Iron	<u>6.8u</u>	<u>J</u>	23. Vanadium	<u>170</u>	
12. Lead	<u>7.3</u>	<u>R</u>	24. Zinc	<u>232</u>	<u>J</u>
Cyanide	<u>NR</u>		Percent Solids (%)		

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: se - dilution dilution factor 5.

Lab Manager Bijalem A Pickral for GS

72 nm
11/19/86

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MJB 117

Date 11/11/86

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc.

CASE NO. 6507

SDW NO. 7/84

LAB SAMPLE ID. NO. NA

QC REPORT NO. 72

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

(ug/L) or mg/kg dry weight (Circle One)

1. Aluminum	88U		13. Magnesium	7.7UP	
2. Antimony	60U		14. Manganese	3.1UP	
3. Arsenic	10U		15. Mercury	0.3	J
4. Barium	4.1U		16. Nickel	12	
5. Beryllium	3.0U		17. Potassium	36	J
6. Cadmium	4.8U		18. Selenium	5.0U	J
7. Calcium	86	J	19. Silver	10U	J
8. Chromium	10U	J	20. Sodium	497	J
9. Cobalt	6.8U		21. Thallium	10U	
10. Copper	6.0U		22. Tin	37U	
11. Iron	71	J	23. Vanadium	14	
12. Lead	5.0	R	24. Zinc	3.1U	J
Cyanide	NR		Percent Solids (S)		

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager Eijobem A Pickral for GS

R 211
11/19/86

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-357-2490

EPA Sample No.
MJB 119

Date 11/11/86

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc.

CASE NO. 6507

SOW NO. 7/84

LAB SAMPLE ID. NO. NA

QC REPORT NO. 72

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1. Aluminum	<u>48U</u>		13. Magnesium	<u>7.7U</u>	
2. Antimony	<u>60 U</u>		14. Manganese	<u>3.1U</u>	
3. Arsenic	<u>10U</u>		15. Mercury	<u>0.5</u>	<u>J</u>
4. Barium	<u>4.1U</u>		16. Nickel	<u>10 U</u>	
5. Beryllium	<u>3.0U</u>		17. Potassium	<u>14U</u>	<u>J</u>
6. Cadmium	<u>4.8U</u>		18. Selenium	<u>5.0U</u>	<u>J</u>
7. Calcium	<u>16</u>	<u>J</u>	19. Silver	<u>10U</u>	<u>J</u>
8. Chromium	<u>10 U</u>	<u>J</u>	20. Sodium	<u>342</u>	<u>J</u>
9. Cobalt	<u>6.8U</u>		21. Thallium	<u>10U</u>	
10. Copper	<u>6.0U</u>		22. Tin	<u>37U</u>	
11. Iron	<u>69</u>	<u>J</u>	23. Vanadium	<u>5.8U</u>	
12. Lead	<u>5.0 U</u>	<u>R</u>	24. Zinc	<u>3.1U</u>	<u>J</u>
Cyanide	<u>NR</u>		Percent Solids (%)		

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager Elizabeth A. Pickral for GS

Rnm
11/19/86

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-357-2490

EPA Sample No.
MTB 120

Date 11/11/86

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc.

CASE NO. 6507

SOW NO. 7/84

LAB SAMPLE ID. NO. NA

QC REPORT NO. 72

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1. <u>Aluminum</u> <u>88u</u>	13. <u>Magnesium</u> <u>22400</u>
2. <u>Antimony</u> <u>60 U</u>	14. <u>Manganese</u> <u>3.1u</u>
3. <u>Arsenic</u> <u>10u</u>	15. <u>Mercury</u> <u>0.5</u> <u>J</u>
4. <u>Barium</u> <u>55</u>	16. <u>Nickel</u> <u>12^{mw} 10</u>
5. <u>Beryllium</u> <u>3.0u</u>	17. <u>Potassium</u> <u>9070</u> <u>J</u>
6. <u>Cadmium</u> <u>4.8u</u>	18. <u>Selenium</u> <u>5.0u</u> <u>J</u>
7. <u>Calcium</u> <u>70900</u> <u>J</u>	19. <u>Silver</u> <u>10u</u> <u>J</u>
8. <u>Chromium</u> <u>10 U</u> <u>J</u>	20. <u>Sodium</u> <u>32200</u> <u>J</u>
9. <u>Cobalt</u> <u>6.8u</u>	21. <u>Thallium</u> <u>10u</u>
10. <u>Copper</u> <u>6.0u</u>	22. <u>Tin</u> <u>37u</u>
11. <u>Iron</u> <u>71</u> <u>J</u>	23. <u>Vanadium</u> <u>18</u>
12. <u>Lead</u> <u>5.0 U</u> <u>R</u>	24. <u>Zinc</u> <u>68</u> <u>J</u>
Cyanide <u>NR</u>	Percent Solids (%) _____

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager Elizabeth A Pichal for GS

Rnm
11/19/86

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MJB 121

Date 11/11/86

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc.
SOW NO. 7/84
LAB SAMPLE ID. NO. NA

CASE NO. 6507
QC REPORT NO. 72

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1. Aluminum	88u		13. Magnesium	7.7u	
2. Antimony	60u		14. Manganese	3.1u	
3. Arsenic	10u		15. Mercury	0.5	J
4. Barium	4.1u		16. Nickel	10u	
5. Beryllium	3.0u		17. Potassium	14u	J
6. Cadmium	4.8u		18. Selenium	5.0u	J
7. Calcium	49	J	19. Silver	10u	J
8. Chromium	10u	J	20. Sodium	344	J
9. Cobalt	6.8u		21. Thallium	10u	
10. Copper	6.0u		22. Tin	37u	
11. Iron	39	J	23. Vanadium	5.8u	
12. Lead	5.0u	R	24. Zinc	3.1u	J
Cyanide	NR		Percent Solids (Z)		

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager Elizabeth A Pickral for GS

Rnm
11/19/86

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MJB 122

Date 11/11/86

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc.
SOW NO. 7/84
LAB SAMPLE ID. NO. NA

CASE NO. 6507
QC REPORT NO. 72

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1. Aluminum	88u		13. Magnesium	24000	
2. Antimony	60 U		14. Manganese	3.1u	
3. Arsenic	10u		15. Mercury	0.4	J
4. Barium	90		16. Nickel	10 U	
5. Beryllium	3.0u		17. Potassium	8760	J
6. Cadmium	4.8u		18. Selenium	5.0u	J
7. Calcium	74200	J	19. Silver	10u	J
8. Chromium	10 U	J	20. Sodium	344	J
9. Cobalt	6.8u		21. Thallium	10u	
10. Copper	6.0u		22. Tin	37u	
11. Iron	67	J	23. Vanadium	63PKH 21	
12. Lead	5.0 U	R	24. Zinc	63	J
Cyanide	NR		Percent Solids (X)		

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager Eijalem A Pickal for G.S

Rnm
11/19/86

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MJB 123

Date 11/11/86

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc.
SOW NO. 7/84
LAB SAMPLE ID. NO. NA

CASE NO. 6507
QC REPORT NO. 72

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

(ug/L) or mg/kg dry weight (Circle One)

1. Aluminum	<u>103</u>	13. Magnesium	<u>20900</u>
2. Antimony	<u>60 U</u>	14. Manganese	<u>3.1U</u>
3. Arsenic	<u>10U</u>	15. Mercury	<u>0.5</u> J
4. Barium	<u>82</u>	16. Nickel	<u>10 U</u>
5. Beryllium	<u>3.0U</u>	17. Potassium	<u>8600</u> J
6. Cadmium	<u>4.8U</u>	18. Selenium	<u>5.0U</u> J
7. Calcium	<u>67100</u> J	19. Silver	<u>10U</u> J
8. Chromium	<u>10 U</u> J	20. Sodium	<u>49400</u> J
9. Cobalt	<u>6.8U</u>	21. Thallium	<u>10U</u>
10. Copper	<u>6.0U</u>	22. Tin	<u>37U</u>
11. Iron	<u>97</u> J	23. Vanadium	<u>14</u>
12. Lead	<u>5.0 U</u> R	24. Zinc	<u>85</u> J
Cyanide	<u>NR</u>	Percent Solids (Z)	_____

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager Elijah A Pictual for G/S

Rnm
11/19/86

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MJB 124

Date **11/11/86**

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc.
SOW NO. 7/84
LAB SAMPLE ID. NO. NA

CASE NO. 6507
QC REPORT NO. 72

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

(ug/L) or mg/kg dry weight (Circle One)

1. Aluminum	88u		13. Magnesium	21100	
2. Antimony	60U		14. Manganese	4.0	
3. Arsenic	10u		15. Mercury	0.4	J
4. Barium	75		16. Nickel	10U	
5. Beryllium	3.0u		17. Potassium	8600	J
6. Cadmium	4.8u		18. Selenium	5.0u	J
7. Calcium	66400	J	19. Silver	10u	J
8. Chromium	10U	J	20. Sodium	48600	J
9. Cobalt	6.8u		21. Thallium	10u	
10. Copper	77		22. Tin	37u	
11. Iron	241	J	23. Vanadium	5.8u	
12. Lead	12	R	24. Zinc	690	J
Cyanide	NR		Percent Solids (X)		

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager Gjajalem A Pictual for GS

Rnm
11/19/86

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MJB 125

Date 11/11/86

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc.

CASE NO. 6507

SOW NO. 7/84

LAB SAMPLE ID. NO. NA

QC REPORT NO. 72

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

(ug/L) or mg/kg dry weight (Circle One)

1. Aluminum	88 U	13. Magnesium	18200
2. Antimony	60 U	14. Manganese	3.1U
3. Arsenic	10U	15. Mercury	0.5 J
4. Barium	73	16. Nickel	10 U
5. Beryllium	3.0U	17. Potassium	5040 J
6. Cadmium	4.8U	18. Selenium	25U J
7. Calcium	64400 J	19. Silver	10U J
8. Chromium	10 U J	20. Sodium	35500 J
9. Cobalt	6.8U	21. Thallium	10U
10. Copper	6.0U	22. Tin	37U
11. Iron	74 J	23. Vanadium	5.8U
12. Lead	5.0 U R	24. Zinc	205P R 205 J
Cyanide	NR	Percent Solids (Z)	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: se dilution factor 5.

Lab Manager Ernesto A. Piccolini for GS

Rnm
11/19/86

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MJB 126

Date 11/11/86

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc.

CASE NO. 6507

SOW NO. 7/84

QC REPORT NO. 72

LAB SAMPLE ID. NO. NA

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

(ug/L) or mg/kg dry weight (Circle One)

1. Aluminum	88 U	13. Magnesium	26600
2. Antimony	60 U	14. Manganese	3.1U
3. Arsenic	10U	15. Mercury	0.6 J
4. Barium	104	16. Nickel	10 U
5. Beryllium	3.0U	17. Potassium	9260 J
6. Cadmium	4.8U	18. Selenium	25U J
7. Calcium	81200 J	19. Silver	10U J
8. Chromium	50 J	20. Sodium	51400 J
9. Cobalt	6.8U	21. Thallium	10U
10. Copper	10	22. Tin	37U
11. Iron	49 J	23. Vanadium	13
12. Lead	5.0 U R	24. Zinc	27 J
Cyanide	NR	Percent Solids (%)	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: se dilution factor 5.

Lab Manager Eizabeth A. Pickal for GS

Rnm
11/19/86

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MJB 127

Date 11/11/86

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc.

CASE NO. 6507

SOW NO. 7/84

LAB SAMPLE ID. NO. NA

QC REPORT NO. 72

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1. Aluminum	88 U	J	13. Magnesium	22200	
2. Antimony	60 U	J	14. Manganese	3.1U	
3. Arsenic	10U		15. Mercury	0.3	J
4. Barium	71		16. Nickel	12	
5. Beryllium	3.0U		17. Potassium	5950	J
6. Cadmium	4.8U		18. Selenium	25U	J
7. Calcium	58200	J	19. Silver	10U	
8. Chromium	10 U		20. Sodium	43500	J
9. Cobalt	6.8U		21. Thallium	10U	
10. Copper	6.0U		22. Tin	37U	
11. Iron	69	J	23. Vanadium	16	
12. Lead	25.0*U	J	24. Zinc	420	
Cyanide	NR		Percent Solids (Z)		

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Pb dilution factor of 5x . Se dilution factor 5.

Lab Manager Elizabeth A Pichal for GS

Rnm
11/19/86

Form 1

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MJB 128

Date 11/11/86

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc.
SOW NO. 7/84
LAB SAMPLE ID. NO. NA

CASE NO. 6507
QC REPORT NO. 72

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

(ug/L) or mg/kg dry weight (Circle One)

1. Aluminum	88 U	J	13. Magnesium	22600	
2. Antimony	60 U	J	14. Manganese	3.1U	
3. Arsenic	10U		15. Mercury	0.6	J
4. Barium	76		16. Nickel	10 U	
5. Beryllium	3.0U		17. Potassium	7830	J
6. Cadmium	4.8U		18. Selenium	25U	J
7. Calcium	65100	J	19. Silver	10U	
8. Chromium	10 U		20. Sodium	44100	J
9. Cobalt	6.8U		21. Thallium	10U	
10. Copper	6.0U		22. Tin	37U	
11. Iron	423	J	23. Vanadium	29	
12. Lead	5.0 U	J	24. Zinc	29	
Cyanide	NR		Percent Solids (Z)		

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: se dilution factor 5.

Lab Manager Elizabeth A Pirkul for GS

Rnm
11/11/86

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MJB 129

Date 11/11/86

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc.

CASE NO. 6507

SOW NO. 7/84

QC REPORT NO. 72

LAB SAMPLE ID. NO. NA

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1. Aluminum	88 U	J	13. Magnesium	7.7 U
2. Antimony	60 U	J	14. Manganese	3.1 U
3. Arsenic	10 U		15. Mercury	0.7 U [#] 0.7 J
4. Barium	4.1 U		16. Nickel	10 U
5. Beryllium	3.0 U		17. Potassium	1.4 U J
6. Cadmium	4.8 U		18. Selenium	5.0 U J
7. Calcium	106	J	19. Silver	10 U
8. Chromium	10 U		20. Sodium	580 J
9. Cobalt	6.8 U		21. Thallium	10 U
10. Copper	6.0 U		22. Tin	37 U
11. Iron	88	J	23. Vanadium	5.8 U
12. Lead	5.0 U	J	24. Zinc	3.1 U
Cyanide	NR		Percent Solids (%)	

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager Ezzat H. Pichal for GS

Rnm
11/17/86

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MJB 130

Date 11/11/86

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc.
SOW NO. 7/84
LAB SAMPLE ID. NO. NA

CASE NO. 6507
QC REPORT NO. 72

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1. Aluminum	88 U	J	13. Magnesium	162	
2. Antimony	60 U	J	14. Manganese	3.1 U	
3. Arsenic	10 U		15. Mercury	0.5	J
4. Barium	4.1 U		16. Nickel	10 U	
5. Beryllium	3.0 U		17. Potassium	67	J
6. Cadmium	4.8 U		18. Selenium	5.0 U	J
7. Calcium	781	J	19. Silver	10 U	
8. Chromium	10 U		20. Sodium	876	J
9. Cobalt	6.8 U		21. Thallium	10 U	
10. Copper	19		22. Tin	37 U	
11. Iron	79	J	23. Vanadium	5.8 U	
12. Lead	5.0 U	J	24. Zinc	3.1 U	
Cyanide	NR		Percent Solids (%)		

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager Elizabeth A. Pichal for GS

Rnm
11/19/86

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MJB 131

Date 11/11/86

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc.

CASE NO. 6507

SOW NO. 7/84

LAB SAMPLE ID. NO. NA

QC REPORT NO. 72

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1. Aluminum	88 U	J	13. Magnesium	21900	
2. Antimony	60 U	J	14. Manganese	5.0	
3. Arsenic	10U		15. Mercury	0.5	J
4. Barium	61		16. Nickel	10 U	
5. Beryllium	3.0U		17. Potassium	7020	J
6. Cadmium	4.8U		18. Selenium	25U	J
7. Calcium	58500	J	19. Silver	10U	
8. Chromium	10 U		20. Sodium	44600	J
9. Cobalt	6.8U		21. Thallium	10U	
10. Copper	6.0U		22. Tin	37U	
11. Iron	214	J	23. Vanadium	21	
12. Lead	5.0 U	J	24. Zinc	4.0	
Cyanide	NR		Percent Solids (X)		

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: Se-dilution factor 5.

Lab Manager Elizabeth A Pichal for GS

Rnm
11/19/86

Form I

U.S. EPA Contract Laboratory Program
Sample Management Office
P.O. Box 818 - Alexandria, VA 22313
703/557-2490 FTS: 8-557-2490

EPA Sample No.
MJB 132

Date 11/11/86

INORGANIC ANALYSIS DATA SHEET

LAB NAME Hittman Ebasco Assoc., Inc.

CASE NO. 6507

SDW NO. 7/84

LAB SAMPLE ID. NO. NA

QC REPORT NO. 72

Elements Identified and Measured

Concentration: Low X Medium _____
Matrix: Water X Soil _____ Sludge _____ Other _____

ug/L or mg/kg dry weight (Circle One)

1. Aluminum	88 U	J	13. Magnesium	7.7 U	
2. Antimony	60 U	J	14. Manganese	3.1 U	
3. Arsenic	10 U		15. Mercury	0.6	J
4. Barium	4.1 U		16. Nickel	10 U	
5. Beryllium	3.0 U		17. Potassium	14 U	J
6. Cadmium	4.8 U		18. Selenium	5.0 U	J
7. Calcium	144	J	19. Silver	10 U	
8. Chromium	10 U		20. Sodium	472	J
9. Cobalt	6.8 U		21. Thallium	10 U	
10. Copper	6.0 U		22. Tin	37 U	
11. Iron	66	J	23. Vanadium	5.8 U	
12. Lead	5.0 U	J	24. Zinc	4.0	
Cyanide	NR		Percent Solids (%)		

Footnotes: For reporting results to EPA, standard result qualifiers are used as defined on Cover Page. Additional flags or footnotes explaining results are encouraged. Definition of such flags must be explicit and contained on Cover Page, however.

Comments: _____

Lab Manager Elizabeth A. Pichal for GS